

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:28:10 ON 07 JUN 2007

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 6 JUN 2007 HIGHEST RN 936692-95-4

DICTIONARY FILE UPDATES: 6 JUN 2007 HIGHEST RN 936692-95-4

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data, predicted properties as well as tags, experimental property data, and on property searching in REGISTRY.

and

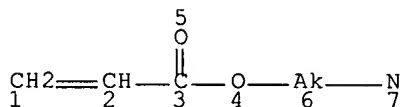
ation

<http://www.cas.org/support/st>

=> d sta que l31

L5 3 SEA FILE=REGIS
O/BI OR 695168
L7 SCR 2043
L11 STR

OR 695168-64-



NODE ATTRIBUTES:

CONNECT IS M1 RC AT 7

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

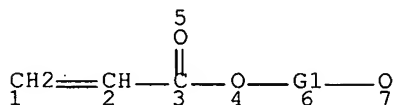
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L13 5435 SEA FILE=REGISTRY CSS FUL L11 AND L7

L14 STR



VAR G1=AK/ID

*For Scanning
into record*

NODE ATTRIBUTES:

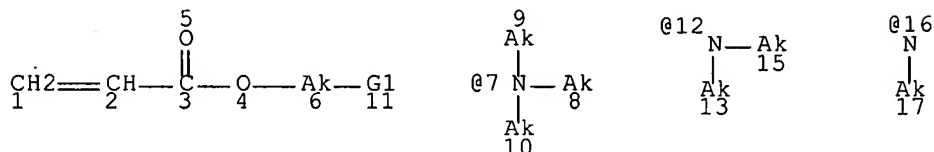
CONNECT IS M1 RC AT 7
 DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 7

STEREO ATTRIBUTES: NONE

L16 732 SEA FILE=REGISTRY SUB=L13 CSS FUL L14
 L17 STR



VAR G1=16/12/7

NODE ATTRIBUTES:

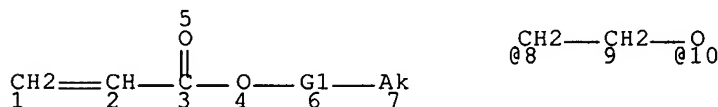
DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE

L19 345 SEA FILE=REGISTRY SUB=L16 CSS FUL L17
 L20 88 SEA FILE=REGISTRY ABB=ON PLU=ON L19 AND (C2H4O OR C3H6O OR C4H8O OR C5H10O OR C6H12O)
 L21 5 SEA FILE=REGISTRY ABB=ON PLU=ON L20 AND ("(C8H16NO2.(C2H4O)NC23H44O2.CL)X" OR "(C8H16NO2.(C2H4O)NC4H6O2.CH3O4S)X" OR "(C8H16NO2.(C2H4O)NC3H4O2.CL)X" OR "(C8H16NO2.(C2H4O)NC4H6O2.CL)X")/MF
 L22 STR



REP G1=(1-3) 8-4 10-7

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED
 NUMBER OF NODES IS 10

STEREO ATTRIBUTES: NONE

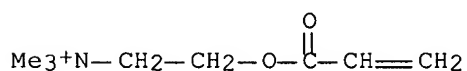
L24 60 SEA FILE=REGISTRY SUB=L19 CSS FUL L22
 L25 37 SEA FILE=REGISTRY ABB=ON PLU=ON L24 NOT L20
 L27 3 SEA FILE=REGISTRY ABB=ON PLU=ON L25 AND 3/NC
 L31 8 SEA FILE=REGISTRY ABB=ON PLU=ON (L5 OR L21 OR L27)

=> d ide can tot 131

L31 ANSWER 1 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 922153-15-9 REGISTRY
 ED Entered STN: 20 Feb 2007
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propen-1-yl)oxy]-, chloride
 (1:1), polymer with α -(1-oxo-2-propen-1-yl)- ω -methoxypoly(oxy-
 1,2-ethanediyl), diblock (CA INDEX NAME)
 MF (C8 H16 N O2 . (C2 H4 O)_n C4 H6 O2 . Cl)x
 CI PMS
 PCT Polyacrylic, Polyether
 SR CA
 LC STN Files: CA; CAPLUS, TOXCENTER

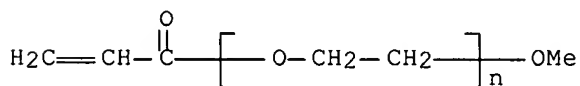
CM 1

CRN 44992-01-0 (20284-80-4)
 CMF C8 H16 N O2 . Cl



CM 2

CRN 32171-39-4
 CMF (C2 H4 O)_n C4 H6 O2
 CCI PMS



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

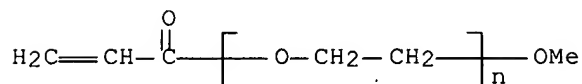
REFERENCE 1: 146:184819

L31 ANSWER 2 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 847278-40-4 REGISTRY
 ED Entered STN: 25 Mar 2005
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, methyl sulfate,
 polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-
 ethanediyl), block (9CI) (CA INDEX NAME)
 MF (C8 H16 N O2 . (C2 H4 O)_n C4 H6 O2 . C H3 O4 S)x
 CI PMS
 PCT Polyacrylic, Polyether, Polyether

SR CA
LC STN Files: CA, CAPLUS

CM 1

CRN 32171-39-4
CMF (C2 H4 O)_n C4 H6 O2
CCI PMS

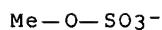


CM 2

CRN 13106-44-0
CMF C8 H16 N O2 . C H3 O4 S

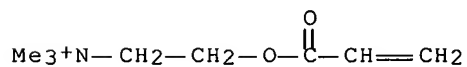
CM 3

CRN 21228-90-0
CMF C H3 O4 S



CM 4

CRN 20284-80-4
CMF C8 H16 N O2



1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

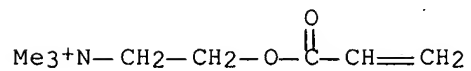
REFERENCE 1: 142:280856

L31 ANSWER 3 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN
RN 695168-66-2 REGISTRY
ED Entered STN: 18 Jun 2004
CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
polymer with 2-(2-ethoxyethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)
MF (C9 H16 O4 . C8 H16 N O2 . Cl)_x
CI PMS
PCT Polyacrylic
SR CA
LC STN Files: CA, CAPLUS, USPATFULL

CM 1

CRN 44992-01-0 (20284-80-4)

CMF C8 H16 N O2 . Cl

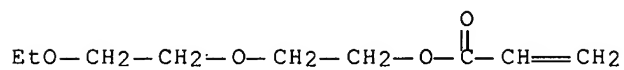


● Cl-

CM 2

CRN 7328-17-8

CMF C9 H16 O4



2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:25256

REFERENCE 2: 141:8765

L31 ANSWER 4 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN

RN 695168-64-0 REGISTRY

ED Entered STN: 18 Jun 2004

CN Ethanaminium, N,N,N-triethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer
with 2-[2-(2-methoxyethoxy)ethoxy]ethyl 2-propenoate (9CI) (CA INDEX
NAME)

MF (C11 H22 N O2 . C10 H18 O5 . Cl)x

CI PMS

PCT Polyacrylic

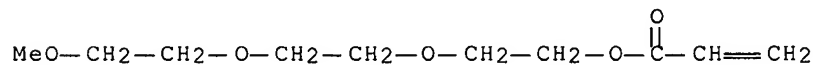
SR CA

LC STN Files: CA, CAPLUS, USPATFULL

CM 1

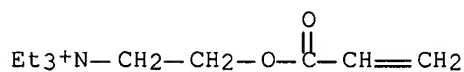
CRN 48067-72-7

CMF C10 H18 O5



CM 2

CRN 25407-23-2 (45116-16-3)
 CMF C11 H22 N O2 . Cl



● Cl-

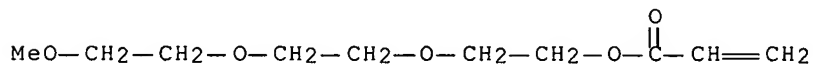
1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:8765

L31 ANSWER 5 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 695168-62-8 REGISTRY
 ED Entered STN: 18 Jun 2004
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with 2-[2-(2-methoxyethoxy)ethoxy]ethyl 2-propenoate (9CI) (CA
 INDEX NAME)
 MF (C10 H18 O5 . C8 H16 N O2 . Cl)x
 CI PMS
 PCT Polyacrylic
 SR CA
 LC STN Files: CA, CAPLUS, USPATFULL

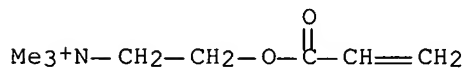
CM 1

CRN 48067-72-7
 CMF C10 H18 O5



CM 2

CRN 44992-01-0 (20284-80-4)
 CMF C8 H16 N O2 . Cl



● Cl-

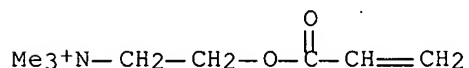
1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:8765

L31 ANSWER 6 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 624722-87-8 REGISTRY
 ED Entered STN: 08 Dec 2003
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-
 ethanediyl), graft (9CI) (CA INDEX NAME)
 DR 620531-02-4
 MF (C8 H16 N O2 . (C2 H4 O)_n C4 H6 O2 . Cl)_x
 CI PMS
 PCT Polyacrylic, Polyether
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

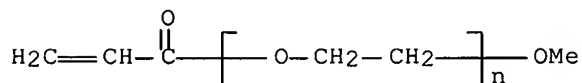
CM 1

CRN 44992-01-0 (20284-80-4)
 CMF C8 H16 N O2 . Cl



CM 2

CRN 32171-39-4
 CMF (C2 H4 O)_n C4 H6 O2
 CCI PMS



3 REFERENCES IN FILE CA (1907 TO DATE)
 3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:25256

REFERENCE 2: 139:382952

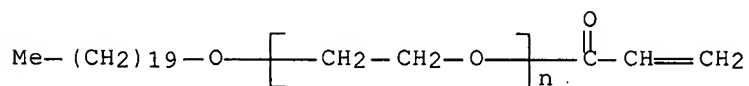
REFERENCE 3: 139:366507

L31 ANSWER 7 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN
 RN 136614-96-5 REGISTRY
 ED Entered STN: 11 Oct 1991
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with α -(1-oxo-2-propenyl)- ω -(eicosyloxy)poly(oxy-1,2-
 ethanediyl) (9CI) (CA INDEX NAME)
 OTHER CA INDEX NAMES:

CN Poly(oxy-1,2-ethanediyl), α -(1-oxo-2-propenyl)- ω -(eicosyloxy)-
 , polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium
 chloride (9CI)
 MF (C8 H16 N O2 . (C2 H4 O)_n C23 H44 O2 . Cl)_x
 CI PMS
 PCT Polyacrylic, Polyether
 SR CA
 LC STN Files: CA, CAPLUS

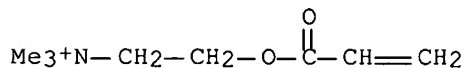
CM 1

CRN 136199-54-7
 CMF (C2 H4 O)_n C23 H44 O2
 CCI PMS



CM 2

CRN 44992-01-0, (20284-80-4)
 CMF C8 H16 N O2 . Cl



● Cl-

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 115:184172

L31 ANSWER 8 OF 8 REGISTRY COPYRIGHT 2007 ACS on STN

RN 112783-31-0 REGISTRY

ED Entered STN: 13 Feb 1988

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with α -(1-oxo-2-propenyl)- ω -hydroxypoly(oxy-1,2-
 ethanediyl) (9CI) (CA INDEX NAME)

OTHER CA INDEX NAMES:

CN Poly(oxy-1,2-ethanediyl), α -(1-oxo-2-propenyl)- ω -hydroxy-,
 polymer with N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]ethanaminium
 chloride (9CI)

MF (C8 H16 N O2 . (C2 H4 O)_n C3 H4 O2 . Cl)_x

CI PMS

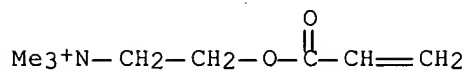
PCT Polyacrylic, Polyether

SR CA

LC STN Files: CA, CAPLUS

CM 1

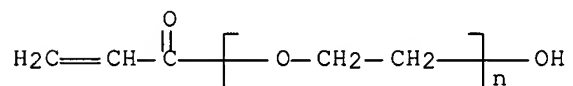
CRN 44992-01-0 (20284-80-4)
 CMF C8 H16 N O2 . Cl



● Cl-

CM 2

CRN 26403-58-7
 CMF (C2 H4 O)_n C3 H4 O2
 CCI PMS



1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 108:78172

=> d his

(FILE 'HOME' ENTERED AT 09:57:39 ON 07 JUN 2007)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 09:57:51 ON 07 JUN 2007

L1 1 S US20040105995/PN OR (US2003-720216# OR JP2002-345706 OR JP200
 E YUASA/AU
 E YUASA T/AU
 L2 105 S E3
 E YUASA TO/AU
 L3 77 S E25
 E YUASA NAME/AU
 L4 10 S E4
 E TOSHIYA/AU
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 09:59:24 ON 07 JUN 2007

L5 3 S E1-E3
 L6 STR
 L7 SCR 2043
 L8 1 S L6 AND L7 SAM
 L9 STR L6
 L10 50 S L9 AND L7
 L11 STR L9

L12 40 S L11 AND L7 CSS SAM
 L13 5435 S L11 AND L7 CSS FUL
 SAV TEMP L13 CORD720A/A
 L14 STR L11
 L15 40 S L14 CSS SAM SUB=L13
 L16 732 S L14 CSS FUL SUB=L13
 SAV TEMP L16 CORD720B/A
 L17 STR L11
 L18 20 S L17 CSS SAM SUB=L16
 L19 345 S L17 CSS FUL SUB=L16
 SAV TEMP L19 CORD720C/A
 L20 88 S L19 AND (C2H4O OR C3H6O OR C4H8O OR C5H10O OR C6H12O)
 L21 5 S L20 AND ("(C8H16NO2.(C2H4O)NC23H44O2.CL)X" OR "(C8H16NO2.(C2H
 L22 STR L14
 L23 4 S L22 CSS SAM SUB=L19
 L24 60 S L22 CSS FUL SUB=L19
 SAV L24 TEMP CORD720D/A
 L25 37 S L24 NOT L20
 L26 0 S L25 AND 2/NC
 L27 3 S L25 AND 3/NC
 L28 4 S L25 AND 4/NC
 L29 33 S L25 NOT L28
 L30 30 S L29 NOT L27
 L31 8 S L5,L21,L27
 L32 STR L22
 L33 5 S L32 CSS SAM SUB=L19
 L34 66 S L32 CSS FUL SUB=L19
 L35 STR L32
 L36 0 S L35 CSS FUL SUB=L19
 L37 6 S L34 NOT L24
 SAV L31 CORD720E/A TEMP

FILE 'HCAPLUS' ENTERED AT 10:26:13 ON 07 JUN 2007

L38 8 S L31
 L39 2 S L38 AND L1-L4
 L40 2 S L38 AND CANON?/PA,CS
 L41 2 S L39,L40
 L42 0 S L38 AND PY<=2002 NOT P/DT
 L43 6 S L38 AND (PD<=20021128 OR PRD<=20021128 OR AD<=20021128) AND P
 L44 6 S L41,L43

FILE 'USPATFULL' ENTERED AT 10:27:54 ON 07 JUN 2007

L45 3 S L31

FILE 'REGISTRY' ENTERED AT 10:28:10 ON 07 JUN 2007

=> fil uspatful

FILE 'USPATFULL' ENTERED AT 10:28:26 ON 07 JUN 2007

CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE COVERS 1971 TO PATENT PUBLICATION DATE: 5 Jun 2007 (20070605/PD)

FILE LAST UPDATED: 5 Jun 2007 (20070605/ED)

HIGHEST GRANTED PATENT NUMBER: US7228569

HIGHEST APPLICATION PUBLICATION NUMBER: US2007124841

CA INDEXING IS CURRENT THROUGH 5 Jun 2007 (20070605/UPCA)

ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 5 Jun 2007 (20070605/PD)

REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2006

USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2006

=> d 145 bib abs hitstr tot

L45 ANSWER 1 OF 3 USPATFULL on STN
 AN 2006:268707 USPATFULL Full-text
 TI Process for preparing a polymer dispersion
 IN Struck, Oliver, Duren, GERMANY, FEDERAL REPUBLIC OF
 Przybyla, Christian, Duisburg, GERMANY, FEDERAL REPUBLIC OF
 Sieger, Achim, Duren, GERMANY, FEDERAL REPUBLIC OF
 Hahn, Mathias, Wilhelmshorst, GERMANY, FEDERAL REPUBLIC OF
 Ruppelt, Dirk, Potzdam, GERMANY, FEDERAL REPUBLIC OF
 Jaeger, Werner, Kleinmachnow, GERMANY, FEDERAL REPUBLIC OF
 PA Akzo Nobel N.V., Arnhem, NETHERLANDS (non-U.S. corporation)
 PI US 2006229401 A1 20061012
 US 7220339 B2 20070522
 AI US 2006-450338 A1 20060612 (11)
 RLI Division of Ser. No. US 2003-430422, filed on 7 May 2003, GRANTED, Pat.
 No. US 7091273
 PRAI US 2002-377989P 20020507 (60)
 DT Utility
 FS APPLICATION
 LREP WHITE, REDWAY & BROWN LLP, 1217 KING STREET, ALEXANDRIA, VA, 22314, US
 CLMN Number of Claims: 19
 ECL Exemplary Claim: 1-31
 DRWN No Drawings
 LN.CNT 576

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a process for preparing an aqueous polymer dispersion comprising: preparing a dispersant co-polymer of a monomer mixture (M) by polymerising the monomer mixture (M) in a reaction medium which is substantially free from organic solvents and/or substantially free from monomers which are not soluble in water, the monomer mixture (M) comprises at least one cationic vinyl monomer (m.sub.3) and at least one monomer (m.sub.4) which is tetrahydrofurfuryl acrylate, tetrahydrofurfuryl methacrylate, or a monomer of the general formula (I): ##STR1## wherein R.sub.1 is hydrogen or methyl, R.sub.2 is hydrogen or C.sub.1-C.sub.2 alkyl, R.sub.3 is hydrogen, C.sub.1-C.sub.4 alkyl, phenyl, or benzyl, n=1 to 4, and x=1 to 50, and then, polymerising one or more water-soluble monomers (m) in an aqueous solution of a salt in the presence of the obtained dispersant polymer. The invention also relates to an aqueous polymer dispersion, use of the dispersion and a process for the production of paper.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 620531-02-4P
 (polymer dispersion used in papermaking)
 RN 620531-02-4 USPATFULL

L45 ANSWER 2 OF 3 USPATFULL on STN
 AN 2004:138823 USPATFULL Full-text
 TI Sizing agent and recording sheet having the same
 IN Yuasa, Toshiya, Kanagawa, JAPAN
 PA Canon Kabushiki Kaisha, Tokyo, JAPAN (non-U.S. corporation)
 PI US 2004105995 A1 20040603
 AI US 2003-720216 A1 20031125 (10)
 PRAI JP 2002-345706 20021128
 JP 2003-198459 20030717
 DT Utility
 FS APPLICATION
 LREP FITZPATRICK CELLA HARPER & SCINTO, 30 ROCKEFELLER PLAZA, NEW YORK, NY, 10112

*reference made -
add to filing
Suspension*

*Current
App*

CLMN Number of Claims: 4
 ECL Exemplary Claim: 1
 DRWN No Drawings
 LN.CNT 497

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A sizing agent includes a vinyl copolymer having a repeating unit (i) having a quaternary amino group and a repeating unit (ii) derived from acrylic monomers having a hydrophilic polyoxyethylene, the ratio by mass, (i):(ii), of the repeating unit (i) to the repeating unit (ii) being 60:40 to 90:10. A recording sheet having the sizing agent is also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 695168-62-8 695168-64-0 695168-66-2

(sizing agents containing vinyl copolymer for recording sheets with good printed images)

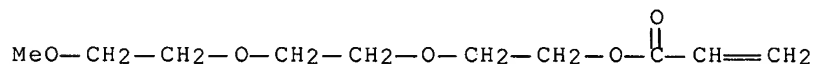
RN 695168-62-8 USPATFULL

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-[2-(2-methoxyethoxy)ethoxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 48067-72-7

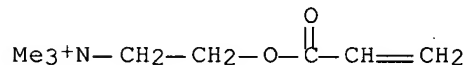
CMF C10 H18 O5



CM 2

CRN 44992-01-0

CMF C8 H16 N O2 . Cl



● Cl-

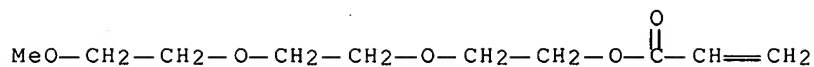
RN 695168-64-0 USPATFULL

CN Ethanaminium, N,N,N-triethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-[2-(2-methoxyethoxy)ethoxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 48067-72-7

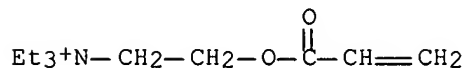
CMF C10 H18 O5



CM 2

CRN 25407-23-2

CMF C11 H22 N O2 . Cl

● Cl⁻

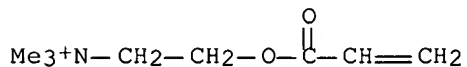
RN 695168-66-2 USPATFULL

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
polymer with 2-(2-ethoxyethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

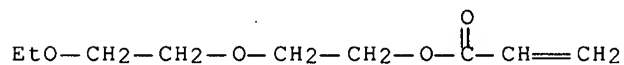
CMF C8 H16 N O2 . Cl

● Cl⁻

CM 2

CRN 7328-17-8

CMF C9 H16 O4



L45 ANSWER 3 OF 3 USPATFULL on STN

AN 2003:300957 USPATFULL Full-text

TI Process for preparing a polymer dispersion

IN Struck, Oliver, Duren, GERMANY, FEDERAL REPUBLIC OF
Przybyla, Christian, Duisburg, GERMANY, FEDERAL REPUBLIC OF
Sieger, Achim, Duren, GERMANY, FEDERAL REPUBLIC OF
Hahn, Mathias, Wilhemshorst, GERMANY, FEDERAL REPUBLIC OF
Ruppelt, Dirk, Potsdam, GERMANY, FEDERAL REPUBLIC OF

Jaeger, Werner, Kleinmachnow, GERMANY, FEDERAL REPUBLIC OF
PA AKZO NOBEL N.V. (non-U.S. corporation)
PI US 2003212183 A1 20031113
US 7091273 B2 20060815
AI US 2003-430422 A1 20030507 (10)
PRAI US 2002-377989P 20020507 (60)
DT Utility
FS APPLICATION
LREP Law Offices of David J. Serbin, 1423 Powhatan Street, ALEXANDRIA, VA,
22314
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 675

Same as

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a process for preparing an aqueous polymer dispersion comprising: preparing a dispersant co-polymer of a monomer mixture (M) by polymerising the monomer mixture (M) in a reaction medium which is substantially free from organic solvents and/or substantially free from monomers which are not soluble in water, the monomer mixture (M) comprises at least one cationic vinyl monomer (m.sub.3) and at least one monomer (m.sub.4) which is tetrahydrofurfuryl acrylate, tetrahydrofurfuryl methacrylate, or a monomer of the general formula (I): ##STR1##

wherein R.sub.1 is hydrogen or methyl, R.sub.2 is hydrogen or C.sub.1-C.sub.2 alkyl, R.sub.3 is hydrogen, C.sub.1-C.sub.4 alkyl, phenyl, or benzyl, n=1 to 4, and x=1 to 50, and then, polymerising one or more water-soluble monomers (m) in an aqueous solution of a salt in the presence of the obtained dispersant polymer. The invention also relates to an aqueous polymer dispersion, use of the dispersion and a process for the production of paper.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 620531-02-4P

(polymer dispersion used in papermaking)

RN 620531-02-4 USPATFULL

=> fil reg

FILE 'REGISTRY' ENTERED AT 10:29:54 ON 07 JUN 2007

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STRUCTURE FILE UPDATES: 6 JUN 2007 HIGHEST RN 936692-95-4

DICTIONARY FILE UPDATES: 6 JUN 2007 HIGHEST RN 936692-95-4

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TSCA INFORMATION NOW CURRENT THROUGH December 2, 2006

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REGISTRY includes numerically searchable data for experimental and

predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=> s 620531-02-4

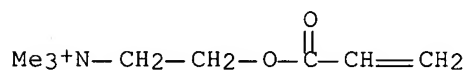
L46 1 620531-02-4
(620531-02-4/RN)

=> d ide can

L46 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2007 ACS on STN
RN 624722-87-8 REGISTRY
ED Entered STN: 08 Dec 2003
CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)
DR 620531-02-4
MF (C8 H16 N O2 . (C2 H4 O)_n C4 H6 O2 . Cl)x
CI PMS
PCT Polyacrylic, Polyether
SR CA
LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

CM 1

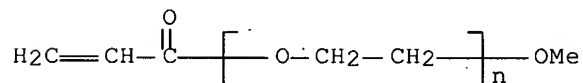
CRN 44992-01-0 (20284-80-4)
CMF C8 H16 N O2 . Cl



● Cl-

CM 2

CRN 32171-39-4
CMF (C2 H4 O)_n C4 H6 O2
CCI PMS



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 141:25256

REFERENCE 2: 139:382952

REFERENCE 3: 139:366507

=> fil hcaplus

FILE 'HCAPLUS' ENTERED AT 10:30:13 ON 07 JUN 2007

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FILE COVERS 1907 - 7 Jun 2007 VOL 146 ISS 24

FILE LAST UPDATED: 6 Jun 2007 (20070606/ED)

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This file contains CAS Registry Numbers for easy and accurate substance identification.

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L44 ANSWER 1 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:472522 HCAPLUS Full-text

DN 141:25256

ED Entered STN: 11 Jun 2004

TI Sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality

IN Yuasa, Toshiya; Sakai, Kiyoshi; Nishida, Shunichiro

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM D21H0019-20

ICS B41M0005-00; C08F0220-28; C08F0220-34; C08F0220-56; C08F0226-04; C08F0290-06; D21H0021-16; D21H0027-00

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
Section cross-reference(s): 74

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | JP 2004162207 | A | 20040610 | JP 2002-329552 | 20021113 <-- |
| PRAI | JP 2002-329552 | | 20021113 | <-- | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| JP 2004162207 | ICM | D21H0019-20 |
| | ICS | B41M0005-00; C08F0220-28; C08F0220-34; C08F0220-56; C08F0226-04; C08F0290-06; D21H0021-16; D21H0027-00 |
| | IPCI | D21H0019-20 [ICM,7]; D21H0019-00 [ICM,7,C*]; |

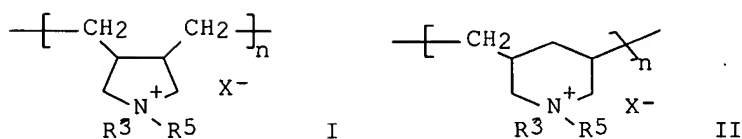
*pub date
for late*

B41M0005-00 [ICS,7]; C08F0220-28 [ICS,7]; C08F0220-34 [ICS,7]; C08F0220-56 [ICS,7]; C08F0220-00 [ICS,7,C*]; C08F0226-04 [ICS,7]; C08F0226-00 [ICS,7,C*]; C08F0290-06 [ICS,7]; C08F0290-00 [ICS,7,C*]; D21H0021-16 [ICS,7]; D21H0021-14 [ICS,7,C*]; D21H0027-00 [ICS,7]

IPCR B41M0005-00 [I,A]; B41M0005-00 [I,C*]; C08F0220-00 [I,C*]; C08F0220-28 [I,A]; C08F0220-34 [I,A]; C08F0220-56 [I,A]; C08F0226-00 [I,C*]; C08F0226-04 [I,A]; C08F0290-00 [I,C*]; C08F0290-06 [I,A]; D21H0019-00 [I,C*]; D21H0019-20 [I,A]; D21H0021-14 [I,C*]; D21H0021-16 [I,A]; D21H0027-00 [N,A]; D21H0027-00 [N,C*]

FTERM 2H086/BA21; 2H086/BA37; 4J027/AC02; 4J027/BA07; 4J027/BA08; 4J027/BA14; 4J027/BA17; 4J100/AL08P; 4J100/AL08Q; 4J100/AL09P; 4J100/AM21Q; 4J100/AN14Q; 4J100/BA08P; 4J100/BA33Q; 4L055/AG65; 4L055/AG71; 4L055/AG88; 4L055/AG89; 4L055/AH13; 4L055/AJ02; 4L055/BE08; 4L055/BE10; 4L055/EA30; 4L055/EA32; 4L055/FA11; 4L055/FA15; 4L055/FA17; 4L055/GA09

GI



- AB The sizing agents contain vinyl copolymers having (A) monomer units chosen from (CH₂CR₁CO₂R₂N+R₃R₄R₅·X⁻) (R₁ = H, Me; R₂ = C₁-10 alkylene; R₃, R₄ = C₁-4 alkyl; R₅ = C₁-8 alkyl, arylalkyl, alicyclic alkyl; X⁻ = counter ion), (CH₂CR₁CONHR₂N+R₃R₄R₅·X⁻) (R₁-R₅, X⁻ = same as above), I (R₃, R₅, X⁻ = same as above), and/or II (R₃, R₅, X⁻ = same as above) and (B) monomer units [CH₂CR₆CO₂(R₇O)_nR₈] (R₆ = H, Me; R₇ = C_{≤4} alkylene; R₈ = C₁-8 alkyl; n = 1-30). Thus, N,N-dimethylaminoethyl methacrylate Me chloride quaternary salt was polymerized with polyethylene glycol Me ether methacrylate to give a graft copolymer, which was mixed with other additives to give a sizing agent. Paper was coated with the sizing agent, dried, and jet printed with color ink to give an image, showing optical d. 1.24, 1.13, 1.16, and 1.45, for magenta, yellow, cyan, and black, resp.
- ST quaternary ammonium salt polymer sizing agent; jet printing paper image quality sizing agent; graft acrylic polyoxyalkylene quaternary salt sizing agent; aminoethyl methacrylate quaternary salt graft copolymer
- IT Polyoxyalkylenes, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (acrylic, graft, quaternary ammonium salt-containing; sizing agents containing
 quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)
- IT Ink-jet recording sheets
 (paper; sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)
- IT Quaternary ammonium compounds, uses
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material

use); PREP (Preparation); USES (Uses) .

(polymers; sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

IT Paper

(printing, ink-jet; sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

IT Sizes (agents)

(sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

IT 321936-94-1P 321936-99-6P, Diallyldimethylammonium chloride-ethylene oxide graft copolymer methyl ether 501931-39-1P 616873-07-5P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(comprised of actual and assumed monomers; sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

IT 321904-01-2P 501930-16-1P 624722-87-8P 695168-66-2P

698387-95-0P 698387-96-1P 698387-97-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

IT 624722-87-8P 695168-66-2P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

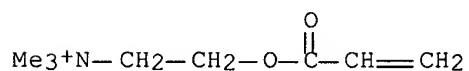
RN 624722-87-8 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl



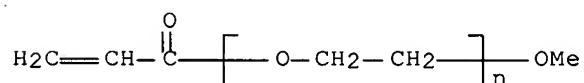
● Cl-

CM 2

CRN 32171-39-4

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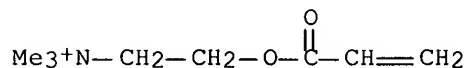
CCI PMS



RN 695168-66-2 HCAPLUS
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with 2-(2-ethoxyethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

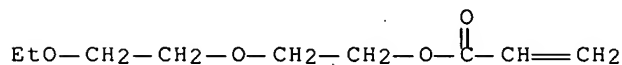
CRN 44992-01-0
 CMF C8 H16 N O2 . Cl



● Cl-

CM 2

CRN 7328-17-8
 CMF C9 H16 O4



L44 ANSWER 2 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 2004:446959 HCAPLUS Full-text
 DN 141:8765
 ED Entered STN: 03 Jun 2004
 TI Sizing agents containing vinyl copolymer and recording sheets having the
 same
 IN Yuasa, Toshiya
 PA Canon Kabushiki Kaisha, Japan
 SO Eur. Pat. Appl., 11 pp.
 CODEN: EPXXDW
 DT Patent
 LA English
 IC ICM D21H0021-16
 CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 74
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|----|--|------|----------|-----------------|--------------|
| PI | EP 1424442 | A2 | 20040602 | EP 2003-26380 | 20031118 <-- |
| | EP 1424442 | A3 | 20041110 | | |
| | EP 1424442 | B1 | 20060607 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | AT 329085 | T | 20060615 | AT 2003-26380 | 20031118 <-- |
| | JP 2005048347 | A | 20050224 | JP 2003-391730 | 20031121 <-- |
| | US 2004105995 | A1 | 20040603 | US 2003-720216 | 20031125 <-- |

| | | | | |
|---------------------|---|----------|------------------|--------------|
| CN 1504611 | A | 20040616 | CN 2003-10117015 | 20031127 <-- |
| PRAI JP 2002-345706 | A | 20021128 | <-- | |
| JP 2003-198459 | A | 20030717 | <-- | |

CLASS

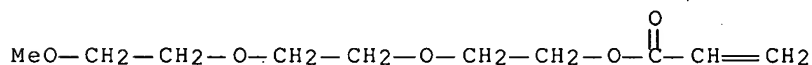
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| | IPCI | D21H0021-14 [I,C]; D21H0017-00 [I,C]; D21H0021-16 [I,A]; D21H0017-36 [I,A] |
| | IPCR | B41M0005-00 [I,C*]; B41M0005-00 [I,A]; B41M0005-50 [I,C*]; B41M0005-52 [I,A]; D21H0017-00 [N,C*]; D21H0017-45 [N,A]; D21H0021-14 [I,C*]; D21H0021-16 [I,A] |
| AT 329085 | ECLA | B41M005/00; B41M005/00J4; D21H021/16; B41M005/52K |
| | IPCI | D21H0021-16 [ICS,7]; D21H0021-14 [ICS,7,C*]; D21H0017-36 [ICS,7]; D21H0017-00 [ICS,7,C*] |
| | IPCR | B41M0005-00 [I,C*]; B41M0005-50 [I,C*]; D21H0017-00 [N,C*]; D21H0021-14 [I,C*]; B41M0005-00 [I,A]; B41M0005-52 [I,A]; D21H0017-45 [N,A]; D21H0021-16 [I,A] |
| JP 2005048347 | ECLA | D21H021/16; B41M005/00; B41M005/52K |
| | IPCI | D21H0021-16 [ICM,7]; D21H0021-14 [ICM,7,C*]; B41J0002-01 [ICS,7]; B41M0005-00 [ICS,7]; C08F0220-34 [ICS,7]; C08F0220-00 [ICS,7,C*]; D21H0017-37 [ICS,7]; D21H0017-00 [ICS,7,C*]; D21H0027-00 [ICS,7] |
| | IPCR | B41J0002-01 [I,A]; B41J0002-01 [I,C*]; B41M0005-00 [I,A]; B41M0005-00 [I,C*]; C08F0220-00 [I,C*]; C08F0220-34 [I,A]; D21H0017-00 [I,C*]; D21H0017-37 [I,A]; D21H0021-14 [I,C*]; D21H0021-16 [I,A]; D21H0027-00 [I,A]; D21H0027-00 [I,C*] |
| | FTERM | 2C056/EA04; 2C056/EA13; 2C056/FC06; 2H086/BA21; 2H086/BA37; 4J100/AL08P; 4J100/AL08Q; 4J100/BA05Q; 4J100/BA06Q; 4J100/BA08Q; 4J100/BA32P; 4J100/CA04; 4J100/JA13; 4L055/AG40; 4L055/AG48; 4L055/AG64; 4L055/AG71; 4L055/AG88; 4L055/AG89; 4L055/AH13; 4L055/AJ02; 4L055/BE08; 4L055/EA32; 4L055/FA11; 4L055/FA12; 4L055/FA19; 4L055/GA08; 4L055/GA09 |
| US 2004105995 | IPCI | B32B0027-08 [ICM,7] |
| | IPCR | B41M0005-00 [I,A]; B41M0005-00 [I,C*]; B41M0005-50 [I,C*]; B41M0005-52 [I,A]; D21H0017-00 [N,C*]; D21H0017-45 [N,A]; D21H0021-14 [I,C*]; D21H0021-16 [I,A] |
| | NCL | 428/515.000; 428/474.400 |
| CN 1504611 | ECLA | D21H021/16; B41M005/00; B41M005/52K |
| | IPCI | D21H0021-16 [ICM,7]; D21H0021-14 [ICM,7,C*] |
| | IPCR | B41M0005-00 [I,C*]; B41M0005-00 [I,A]; B41M0005-50 [I,C*]; B41M0005-52 [I,A]; D21H0017-00 [N,C*]; D21H0017-45 [N,A]; D21H0021-14 [I,C*]; D21H0021-16 [I,A] |
| AB | ECLA | D21H021/16; B41M005/00; B41M005/52K |
| The sizing agent comprises a vinyl copolymer having a repeating unit (i) - [CH(COOCH ₂ CH ₂ NR ₃ +)CH ₂]- (R = C1-10 alkyl) and a repeating unit (ii) - [CH(COO(CH ₂ CH ₂ O)kR')CH ₂]- (R' = C1-10 alkyl; k = 1-3), wherein a ratio of (i):(ii) is 60:40-90:10. The recording sheet comprising a fibrous pulp, a filler and the sizing agent provides printed images having good properties, such as good print d., color-forming properties, water resistance, light resistance and nonbleeding; and in particular, is useful for ink-jet recording of full-color images. Thus, a sizing agent comprising N,N'-Dimethylaminoethyl acrylate Me chloride-methoxytriethylene glycol acrylate copolymer-containing solution 40, PVA 217 (polyvinyl alc.) 10, SK 20 (oxidized starch) 45, SKS 257 (alkylketene dimer) 1, Pulset JK 173 (cationic polymer) 10 and water 1233.3 | | |

parts was applied onto a plain paper, dried at 100° for 5 min, and ink-jet printed to give full color image showing good print d., water resistance and light resistance.

- ST vinyl copolymer sizing agent recording sheet; ink jet printing paper
sizing agent
- IT Ink-jet recording sheets.
(paper; sizing agents containing vinyl copolymer for recording sheets with good printed images)
- IT Paper
(printing, ink-jet; sizing agents containing vinyl copolymer for recording sheets with good printed images)
- IT Paper
(printing; sizing agents containing vinyl copolymer for recording sheets with good printed images)
- IT Cellulose pulp
Fillers
Sizes (agents)
(sizing agents containing vinyl copolymer for recording sheets with good printed images)
- IT 695168-62-8 695168-64-0 695168-66-2
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(sizing agents containing vinyl copolymer for recording sheets with good printed images)
- IT 695168-62-8 695168-64-0 695168-66-2
RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)
(sizing agents containing vinyl copolymer for recording sheets with good printed images)
- RN 695168-62-8 HCAPLUS
- CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with 2-[2-(2-methoxyethoxy)ethoxy]ethyl 2-propenoate (9CI) (CA INDEX NAME)

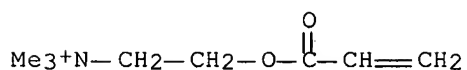
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CRN 48067-72-7
CMF C10 H18 O5



CM 2

CRN 44992-01-0
CMF C8 H16 N O2 . C1



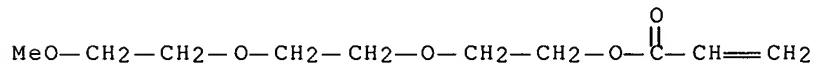
● C1-

RN 695168-64-0 HCAPLUS
 CN Ethanaminium, N,N,N-triethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer
 with 2-[2-(2-methoxyethoxy)ethoxy]ethyl 2-propenoate (9CI) (CA INDEX
 NAME)

CM 1

CRN 48067-72-7

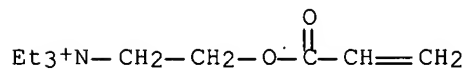
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CM 2

CRN 25407-23-2

CMF C11 H22 N O2 . Cl



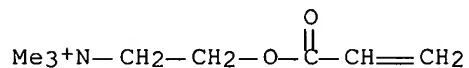
● Cl⁻

RN 695168-66-2 HCAPLUS
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with 2-(2-ethoxyethoxy)ethyl 2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

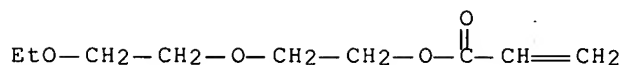


● Cl⁻

CM 2

CRN 7328-17-8

CMF C9 H16 O4



L44 ANSWER 3 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 2003:913200 HCAPLUS Full-text
 DN 139:382952
 ED Entered STN: 21 Nov 2003
 TI Process for preparing polymer dispersion for papermaking
 IN Struck, Oliver; Przybyla, Christian; Sieger, Achim; Hahn, Mathias;
 Ruppelt, Dirk; Jaeger, Werner
 PA Akzo Nobel N.V., Neth.; Eka Chemicals Ab
 SO PCT Int. Appl., 20 pp.
 CODEN: PIXXD2
 DT **Patent**
 LA English
 IC ICM C08F0002-20
 ICS D21H0021-10
 CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)
 Section cross-reference(s): 37

*alk-acid
add to
suspension*

FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|------|----------|-----------------|--------------|
| WO 2003095501 | A1 | 20031120 | WO 2003-SE726 | 20030506 <-- |
| W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| AU 2003230523 | A1 | 20031111 | AU 2003-230523 | 20030506 <-- |
| CA 2485288 | A1 | 20031120 | CA 2003-2485288 | 20030506 <-- |
| EP 1501876 | A1 | 20050202 | EP 2003-723594 | 20030506 <-- |
| R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| BR 2003011432 | A | 20050322 | BR 2003-11432 | 20030506 <-- |
| CN 1653091 | A | 20050810 | CN 2003-810202 | 20030506 <-- |
| JP 2005524741 | T | 20050818 | JP 2004-503514 | 20030506 <-- |
| RU 2281294 | C2 | 20060810 | RU 2004-135557 | 20030506 <-- |
| ZA 2004008972 | A | 20051116 | ZA 2004-8972 | 20041105 <-- |
| NO 2004005346 | A | 20050207 | NO 2004-5346 | 20041206 <-- |
| PRAI EP 2002-445055 | A | 20020507 | <-- | |
| WO 2003-SE726 | W | 20030506 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| WO 2003095501 | ICM | C08F0002-20 |
| | ICS | D21H0021-10 |
| | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |

| | | |
|---------------|-------|---|
| | ECLA | C08F002/10; D21H017/45 |
| AU 2003230523 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |
| CA 2485288 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |
| EP 1501876 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |
| BR 2003011432 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |
| CN 1653091 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |
| JP 2005524741 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0017-45 [ICS,7]; D21H0017-00 [ICS,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [N,A]; D21H0021-10 [N,C*] |
| | FTERM | 4J011/JA06; 4J011/JB26; 4L055/AG65; 4L055/AG71; 4L055/AG72; 4L055/AG89; 4L055/AH18; 4L055/EA30; 4L055/FA10 |
| RU 2281294 | IPCI | C08F0002-20 [I,A]; C08F0002-12 [I,C*]; D21H0021-10 [I,A] |
| | ECLA | C08F002/10; D21H017/45 |
| ZA 2004008972 | IPCI | C08F [ICS,7]; D21H [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-12 [I,C*]; D21H0017-00 [I,C*]; D21H0021-10 [N,C*]; C08F0002-10 [I,A]; C08F0002-20 [I,A]; D21H0017-45 [I,A]; D21H0021-10 [N,A] |
| | ECLA | C08F002/10; D21H017/45 |
| NO 2004005346 | IPCI | C08F0002-20 [ICM,7]; C08F0002-12 [ICM,7,C*]; D21H0021-10 [ICS,7] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-20 [I,A]; D21H0017-00 [I,C*]; D21H0017-45 [I,A]; D21H0021-10 [I,C*]; D21H0021-10 [I,A] |
| | ECLA | C08F002/10; D21H017/45 |

AB The process comprises polymerizing ≥ 1 water-soluble monomer (e.g., acrylamide and acryloxyethyltrimethylbenzylammonium chloride) in an aqueous solution of salt in the presence of a dispersant polymer (e.g., diallyldimethylammonium chloride-acryloxyethyltrimethylammonium chloride-polyethylene glycol Me ether acrylate copolymer), wherein the dispersant polymer is a copolymer of a monomer mixture comprising ≥ 1 cationic monomer and ≥ 1 monomer containing tetrahydrofurfuryl acrylate, tetrahydrofurfuryl methacrylate, or a monomer

CH₂:C(R₁)COO[(CH₂)_nCH(R₂)O]_xR₃ (R₁ = H, Me; R₂ = H, C1-2 alkyl; R₃ = H, C1-4 alkyl, Ph, benzyl; n = 1-4; x = 1- 50), and the monomer mixture is free from monomers which are not soluble in water and/or the dispersant polymer is obtainable by polymerizing the monomer mixture in a reaction medium which is substantially free from organic solvents.

ST acrylamide acryloxyethyltrimethylbenzylammonium chloride copolymer
dispersion papermaking; polymer dispersant polyacrylic dispersion prepn

IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
(Preparation); USES (Uses)
(acrylic, dispersants; process for preparing polymer dispersion for
papermaking)

IT Polyoxyalkylenes, uses
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
(Preparation); USES (Uses)
(acrylic, graft, dispersants; process for preparing polymer dispersion for
papermaking)

IT Dispersing agents
Paper
(process for preparing polymer dispersion for papermaking)

IT 620531-01-3P, Acryloyloxyethyltrimethylammonium chloride-
diallyldimethylammonium chloride-polyethylene glycol methyl ether acrylate
copolymer 620531-03-5P 620531-05-7P 620531-06-8P
624722-87-8P
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
(Preparation); USES (Uses)
(dispersant; process for preparing polymer dispersion for papermaking)

IT 74153-51-8, Acrylamide-acryloyloxyethyltrimethylbenzylammonium chloride
copolymer
RL: POF (Polymer in formulation); TEM (Technical or engineered material
use); USES (Uses)
(process for preparing polymer dispersion for papermaking)

RE.CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

(1) Sun-Yi, H; US 6262168 B1 2001 HCAPLUS

(2) Takeda, H; US 4929655 A 1990 HCAPLUS

IT **624722-87-8P**
RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
(Preparation); USES (Uses)
(dispersant; process for preparing polymer dispersion for papermaking)

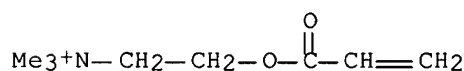
RN 624722-87-8 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
polymer with α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-
ethanediyl), graft (9CI) (CA INDEX NAME)

CM . 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl

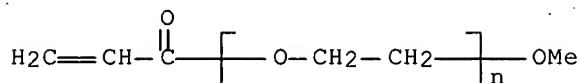


CM 2

CRN 32171-39-4

CMF (C2 H4 O)n C4 H6 O2

CCI PMS



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|----------------------------|---------------|--------------|-------------|--------------------------|--------------------|
| Sun-Yi, H | 2001 | | | US 6262168 B1 | HCAPLUS |
| Takeda, H | 1990 | | | US 4929655 A | HCAPLUS |

L44 ANSWER 4 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:892458 HCAPLUS Full-text

DN 139:366507

ED Entered STN: 14 Nov 2003

TI Preparing a polymer dispersion, and use in papermaking

IN Struck, Oliver; Przybyla, Christian; Sieger, Achim; Hahn, Mathias;
Ruppelt, Dirk; Jaeger, Werner

PA Akzo Nobel N.V., Neth.

SO U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DT **Patent**

LA English

IC ICM C08F0002-16

INCL 524460000

CC 43-7 (Cellulose, Lignin, Paper, and Other Wood Products)

Section cross-reference(s): 37

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|------|----------|-----------------|--------------|
| PI | US 2003212183 | A1 | 20031113 | US 2003-430422 | 20030507 <-- |
| | US 7091273 | B2 | 20060815 | | |
| | US 2006229401 | A1 | 20061012 | US 2006-450338 | 20060612 <-- |
| | US 7220339 | B2 | 20070522 | | |
| PRAI | US 2002-377989P | P | 20020507 | <-- | |
| | US 2003-430422 | A3 | 20030507 | | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|---------------|-------|--|
| US 2003212183 | ICM | C08F0002-16 |
| | INCL | 524460000 |
| | IPCI | C08F0002-16 [I,A]; C08F0002-20 [I,A]; C08F0002-24 [I,A]; C08F0002-12 [I,C*]; D21H0017-45 [I,A]; D21H0017-00 [I,C*] |
| | IPCR | C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-16 [I,A]; C08F0002-24 [I,A] |
| | NCL | 524/460.000 |
| | ECLA | C08F002/10; C08F002/24 |
| US 2006229401 | IPCI | C08K0003-20 [I,A]; C08K0003-00 [I,C*]; D21D0005-02 [I,A]; D21D0005-00 [I,C*]; C08F0002-16 [I,A]; |

ret add

C08F0002-20 [I,A]; C08F0002-12 [I,C*]; D21H0017-45 [I,A]; D21H0017-00 [I,C*]
 IPCR C08K0003-00 [I,C]; C08K0003-20 [I,A]; C08F0002-04 [I,C*]; C08F0002-10 [I,A]; C08F0002-12 [I,C*]; C08F0002-16 [I,A]; C08F0002-24 [I,A]
 NCL 524/458.000; 524/289.000; 524/501.000; 524/517.000; 524/521.000; 524/523.000; 524/815.000; 524/827.000; 524/831.000; 162/168.100
 ECLA C08F002/10; C08F002/24

AB A process for preparing an aqueous polymer dispersion comprises preparing a dispersant co-polymer of a monomer mixture (M) by polymerizing the monomer mixture (M) in a reaction medium which is substantially free from organic solvents and/or substantially free from monomers which are not soluble in H₂O, the M comprises ≥ 1 cationic vinyl monomer (m₃) and ≥ 1 monomer (m₄) which is tetrahydrofurfuryl acrylate, tetrahydrofurfuryl methacrylate, or a monomer CH₂:CR₁CO₂((CH₂)_nCHR₂)_xR₃; where R₁ = H or Me; R₂ = H or Me or Et; R₃ = H, C₁-4 alkyl, Ph, or benzyl; n = 1-4, and x = 1-50, and polymerizing ≥ 1 water-soluble monomers (m) in an aqueous solution of a salt in the presence of the dispersant polymer.

ST cationic dispersant polymn acrylamide acryloxyethyltrimethylammonium chloride; paper retention aid acrylamide copolymer dispersion

IT Dispersing agents
 (cationic; polymer dispersion used in papermaking)

IT Polymerization
 (polymer dispersion used in papermaking)

IT Paper
 (retention aids; polymer dispersion used in papermaking)

IT 620531-01-3P, Diallyldimethylammonium chloride-acryloyloxyethyltrimethylammonium chloride-polyethylene glycol methyl ether acrylate copolymer 620531-03-5P 620531-04-6P 620531-05-7P 620531-06-8P **624722-87-8P**
 RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)
 (polymer dispersion used in papermaking)

IT 7783-20-2, Ammonium sulfate, uses
 RL: NUU (Other use, unclassified); USES (Uses)
 (polymer dispersion used in papermaking)

IT 74153-51-8P, Acrylamide-acryloyloxyethyltrimethylbenzylammonium chloride copolymer
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)
 (retention aid; polymer dispersion used in papermaking)

RE.CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; EP 0169674 1986 HCAPLUS
- (2) Anon; EP 0170394 1986 HCAPLUS
- (3) Anon; EP 0183466 1986 HCAPLUS
- (4) Anon; EP 0364175 1990 HCAPLUS
- (5) Anon; EP 0525751 1993 HCAPLUS
- (6) Anon; EP 0630909 1994 HCAPLUS
- (7) Anon; EP 0637598 1995 HCAPLUS
- (8) Anon; EP 0657478 1995 HCAPLUS
- (9) Anon; EP 0717056 1996 HCAPLUS
- (10) Anon; EP 0831177 1998 HCAPLUS
- (11) Anon; WO 0011052 2000 HCAPLUS
- (12) Anon; WO 0011053 2000 HCAPLUS
- (13) Anon; WO 0020470 2000 HCAPLUS
- (14) Anon; EP 0877120 2000 HCAPLUS
- (15) Anon; WO 0118063 2001 HCAPLUS
- (16) Fock; US 5447981 A 1995 HCAPLUS

- (17) Huang; US 6262168 B1 2001 HCAPLUS
 (18) Hurlock; US 5597859 A 1997 HCAPLUS
 (19) Hurlock; US 6133368 A 2000 HCAPLUS
 (20) Messner; US 5403883 A 1995 HCAPLUS
 (21) Nzudie; US 6221957 B1 2001 HCAPLUS
 (22) Takeda; US 4929655 A 1990 HCAPLUS
 (23) Takeda; US 5587415 A 1996 HCAPLUS

IT 624722-87-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
 (Preparation); USES (Uses)
 (polymer dispersion used in papermaking)

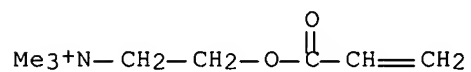
RN 624722-87-8 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-
 ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl



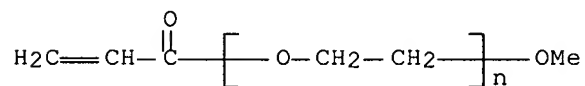
● Cl⁻

CM 2

CRN 32171-39-4

CMF (C2 H4 O)_n C4 H6 O2

CCI PMS



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|----------------------------|---------------|--------------|-------------|--------------------------|--------------------|
| ===== | ===== | ===== | ===== | ===== | ===== |
| Anon | 1986 | | | EP 0169674 | HCAPLUS |
| Anon | 1986 | | | EP 0170394 | HCAPLUS |
| Anon | 1986 | | | EP 0183466 | HCAPLUS |
| Anon | 1990 | | | EP 0364175 | HCAPLUS |
| Anon | 1993 | | | EP 0525751 | HCAPLUS |
| Anon | 1994 | | | EP 0630909 | HCAPLUS |
| Anon | 1995 | | | EP 0637598 | HCAPLUS |
| Anon | 1995 | | | EP 0657478 | HCAPLUS |
| Anon | 1996 | | | EP 0717056 | HCAPLUS |
| Anon | 1998 | | | EP 0831177 | HCAPLUS |
| Anon | 2000 | | | WO 0011052 | HCAPLUS |

| | | | | |
|---------|------|--|---------------|---------|
| Anon | 2000 | | WO 0011053 | HCAPLUS |
| Anon | 2000 | | WO 0020470 | HCAPLUS |
| Anon | 2000 | | EP 0877120 | HCAPLUS |
| Anon | 2001 | | WO 0118063 | HCAPLUS |
| Fock | 1995 | | US 5447981 A | HCAPLUS |
| Huang | 2001 | | US 6262168 B1 | HCAPLUS |
| Hurlock | 1997 | | US 5597859 A | HCAPLUS |
| Hurlock | 2000 | | US 6133368 A | HCAPLUS |
| Messner | 1995 | | US 5403883 A | HCAPLUS |
| Nzudie | 2001 | | US 6221957 B1 | HCAPLUS |
| Takeda | 1990 | | US 4929655 A | HCAPLUS |
| Takeda | 1996 | | US 5587415 A | HCAPLUS |

L44 ANSWER 5 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 1991:584172 HCAPLUS Full-text

DN 115:184172

ED Entered STN: 01 Nov 1991

TI Water-absorbing resin compositions

IN Tanaka, Keiji

PA Sanyo Chemical Industries Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DT **Patent**

LA Japanese

IC ICM C08F0220-28

ICS C08F0299-02; C08L0033-14

CC 35-4 (Chemistry of Synthetic High Polymers)

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | JP 03093815 | A | 19910418 | JP 1989-232466 | 19890906 <-- |
| PRAI | JP 1989-232466 | | 19890906 | <-- | |

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
|-------------|-------|--|
| JP 03093815 | ICM | C08F0220-28 |
| | ICS | C08F0299-02; C08L0033-14 |
| | IPCI | C08F0220-28 [ICM,5]; C08F0220-00 [ICM,5,C*]; C08F0299-02 [ICS,5]; C08F0299-00 [ICS,5,C*]; C08L0033-14 [ICS,5]; C08L0033-00 [ICS,5,C*] |
| | IPCR | C08L0033-14 [I,A]; C08F0020-00 [I,C*]; C08F0020-26 [I,A]; C08F0220-00 [I,C*]; C08F0220-28 [I,A]; C08F0290-00 [I,C*]; C08F0290-00 [I,A]; C08F0299-00 [I,C*]; C08F0299-02 [I,A]; C08L0033-00 [I,C*]; C08L0033-04 [I,A] |

AB Title resins which can absorb ≥ 10 g H₂O/g are prepared by solubilizing H₂C:CR₁CO(OC₂H₄)_m(OC₃H₆)_nOR₂ (I, R₁ = H, Me; R₂ = C_{≥5} alkyl; m_≥2; n \geq 0) in an aqueous solution of hydrophilic monomers and polymerizing in H₂O in the absence of crosslinkers. Thus, copolymers of I (R₁ = H, R₂ = eicosyl, m = 20, n = 0) and Na acrylate absorbed 310 g H₂O/g while copolymers of I (R₁ = H, R₂ = Et, m = 20, n = 0) and Na acrylate were water-soluble

ST water absorbing resin; polyoxyalkylene ether acrylate copolymer hydrophilic

IT Absorbents

(for water, polyoxyalkylene (meth)acrylate C_{≥5} alkyl ether-based, preparation of)

IT 136614-95-4P 136614-96-5P 136614-97-6P

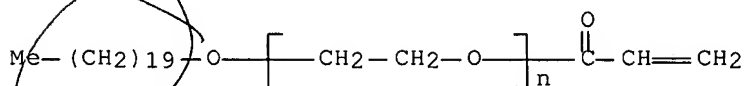
RL: PREP (Preparation)

(preparation of, water-absorbing)

IT 136614-96-5P
 RL: PREP (Preparation)
 (preparation of, water-absorbing)
 RN 136614-96-5 HCAPLUS
 CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
 polymer with α -(1-oxo-2-propenyl)- ω -(eicosyloxy)poly(oxy-1,2-
 ethanediyl) (9CI) (CA INDEX NAME)

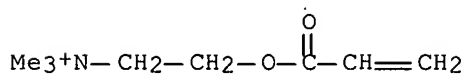
CM 1

CRN 136199-54-7
 CMF (C2 H4 O)_n C23 H44 O2
 CCI PMS



CM 2

CRN 44992-01-0
 CMF C8 H16 N O2 . Cl



● Cl-

L44 ANSWER 6 OF 6 HCAPLUS COPYRIGHT 2007 ACS on STN
 AN 1988:78172 HCAPLUS Full-text
 DN 108:78172
 ED Entered STN: 05 Mar 1988
 TI Manufacture of microporous separation material
 IN Kawase, Kaoru; Sakami, Hiroshi; Suzuki, Kenji; Iida, Shozo
 PA Agency of Industrial Sciences and Technology, Japan
 SO Jpn. Kokai Tokkyo Koho, 3 pp.
 CODEN: JKXXAF
 DT **Patent**
 LA Japanese
 IC ICM C01B0033-26
 ICS B01J0020-10; B01J0029-02
 ICA B01D0015-00; B01D0053-02; C02F0001-28; C09K0003-00
 CC 49-4 (Industrial Inorganic Chemicals)
 FAN.CNT 3

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|--------------|
| PI | JP 62138317 | A | 19870622 | JP 1985-278593 | 19851210 <-- |
| | US 4753908 | A | 19880628 | US 1986-940087 | 19861210 <-- |
| PRAI | JP 1985-278592 | A | 19851210 | <-- | |
| | JP 1985-278593 | A | 19851210 | <-- | |

*Separate
 polymers -
 not all monomers
 in one*

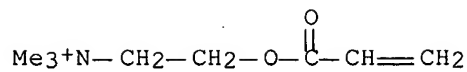
JP 1985-278594

A

19851210 <--

CLASS

| PATENT NO. | CLASS | PATENT FAMILY CLASSIFICATION CODES |
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| JP 62138317 | ICM | C01B0033-26 |
| | ICS | B01J0020-10; B01J0029-02 |
| | ICA | B01D0015-00; B01D0053-02; C02F0001-28; C09K0003-00 |
| | IPCI | C01B0033-26 [ICM,4]; C01B0033-00 [ICM,4,C*]; B01J0020-10 [ICS,4]; B01J0029-02 [ICS,4]; B01D0015-00 [ICA,4]; B01D0053-02 [ICA,4]; C02F0001-28 [ICA,4]; C09K0003-00 [ICA,4] |
| | IPCR | B01D0015-00 [I,A]; B01D0015-00 [I,C*]; B01D0053-02 [I,A]; B01D0053-02 [I,C*]; B01J0020-10 [I,A]; B01J0020-10 [I,C*]; C01B0033-00 [I,C*]; C01B0033-26 [I,A]; C02F0001-28 [I,A]; C02F0001-28 [I,C*]; C09K0003-00 [I,A]; C09K0003-00 [I,C*] |
| US 4753908 | IPCI | B01J0021-16 [ICM,4]; B01J0021-00 [ICM,4,C*]; B01J0020-12 [ICS,4]; B01J0020-10 [ICS,4,C*] |
| | IPCR | B01J0020-10 [I,C*]; B01J0020-16 [I,A]; B01J0020-28 [I,A]; B01J0020-28 [I,C*]; B01J0031-06 [I,A]; B01J0031-06 [I,C*] |
| | NCL | 502/063.000; 264/044.000; 501/082.000; 502/062.000; 502/082.000 |
| AB | A smectite mineral, e.g., montmorillonite, water-soluble polymer having basic dissociating group, colloidal SiO ₂ , and H ₂ O are mixed to form an inclusion compound, then dried, and sintered to give a microporous body for filtering material. Thus, 5 mL aqueous polyoxyethylene acrylate-trimethyl-aminoethyl acrylate quaternary ammonium chloride copolymer was mixed with 5 mL colloidal SiO ₂ , 4 mL H ₂ O, and 1 g Na montmorillonite, dried at 110° for 1 day, and sintered at 500° for 3 h to give a porous body having total surface area 443 m ² /g, sp. volume 0.24 cm ³ /g, porosity 0.48, and N adsorptivity 0.24 cm ³ /g. | |
| ST | smectite mineral inclusion compd adsorbent; montmorillonite inclusion compd adsorbent | |
| IT | Adsorbents (smectite-group mineral inclusion compound for, intercalated with water-soluble polymer and colloidal silica) | |
| IT | Smectite-group minerals RL: USES (Uses) (inclusion compds., with water-soluble polymer and colloidal silica, for adsorbent) | |
| IT | 1318-93-ODP, Montmorillonite, inclusion compds. with water-soluble polymer and colloidal silica 7631-86-9DP, inclusion compds. with montmorillonite and water-soluble polymers 112783-31-ODP, inclusion compds. with montmorillonite and colloidal silica RL: PREP (Preparation) (preparation of, for adsorbents) | |
| IT | 112783-31-ODP, inclusion compds. with montmorillonite and colloidal silica RL: PREP (Preparation) (preparation of, for adsorbents) | |
| RN | 112783-31-0 HCAPLUS | |
| CN | Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with α-(1-oxo-2-propenyl)-ω-hydroxypoly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME) | |
| CM | 1 | |
| CRN | 44992-01-0 | |
| CMF | C8 H16 N O2 . C1 | |



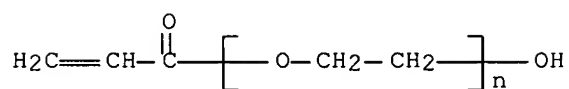
● Cl⁻

CM 2

CRN 26403-58-7

CMF (C2 H4 O)_n C3 H4 O2

CCI PMS.



=> s 146

L47 3 L46

=> d bib abs hitstr retable tot

L47 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2004:472522 HCAPLUS Full-text

DN 141:25256

TI Sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality

IN Yuasa, Toshiya; Sakai, Kiyoshi; Nishida, Shunichiro

PA Canon Inc., Japan

SO Jpn. Kokai Tokkyo Koho, 21 pp.

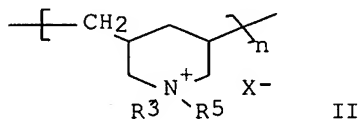
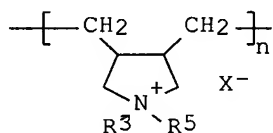
CODEN: JKXXAF

DT Patent

LA Japanese

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|----------------|------|----------|-----------------|----------|
| PI | JP 2004162207 | A | 20040610 | JP 2002-329552 | 20021113 |
| PRAI | JP 2002-329552 | | 20021113 | | |
| GI | | | | | |



AB The sizing agents contain vinyl copolymers having (A) monomer units chosen from (CH₂CR₁CO₂R₂N+R₃R₄R₅·X⁻) (R₁ = H, Me; R₂ = C₁-10 alkylene; R₃, R₄ = C₁-4 alkyl; R₅ = C₁-8 alkyl, arylalkyl, alicyclic alkyl; X⁻ = counter ion), (CH₂CR₁CONHR₂N+R₃R₄R₅·X⁻) (R₁-R₅, X⁻ = same as above), I (R₃, R₅, X⁻ = same as above), and/or II (R₃, R₅, X⁻ = same as above) and (B) monomer units [CH₂CR₆CO₂(R₇)_nR₈] (R₆ = H, Me; R₇ = C_{≤4} alkylene; R₈ = C₁-8 alkyl; n = 1-30). Thus, N,N-dimethylaminoethyl methacrylate Me chloride quaternary salt was polymerized with polyethylene glycol Me ether methacrylate to give a graft copolymer, which was mixed with other additives to give a sizing agent. Paper was coated with the sizing agent, dried, and jet printed with color ink to give an image, showing optical d. 1.24, 1.13, 1.16, and 1.45, for magenta, yellow, cyan, and black, resp.

IT 624722-87-8P

RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(sizing agents containing quaternary ammonium salt polymers useful for full-color jet-printing paper with high image quality)

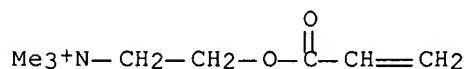
RN 624722-87-8 HCAPLUS

CN. Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with α-(1-oxo-2-propenyl)-ω-methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl



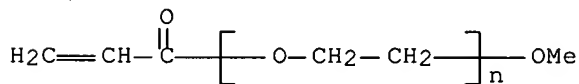
● Cl⁻

CM 2

CRN 32171-39-4

CMF (C2 H4 O)_n C4 H6 O2

CCI PMS



L47 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:913200 HCAPLUS [Full-text](#)

DN 139:382952

TI Process for preparing polymer dispersion for papermaking

IN Struck, Oliver; Przybyla, Christian; Sieger, Achim; Hahn, Mathias; Ruppelt, Dirk; Jaeger, Werner

PA Akzo Nobel N.V., Neth.; Eka Chemicals Ab

SO PCT Int. Appl., 20 pp.

CODEN: PIXXD2

DT Patent
 LA English
 FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|---|------|----------|-----------------|----------|
| PI | WO 2003095501 | A1 | 20031120 | WO 2003-SE726 | 20030506 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 2003230523 | A1 | 20031111 | AU 2003-230523 | 20030506 |
| | CA 2485288 | A1 | 20031120 | CA 2003-2485288 | 20030506 |
| | EP 1501876 | A1 | 20050202 | EP 2003-723594 | 20030506 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK | | | | |
| | BR 2003011432 | A | 20050322 | BR 2003-11432 | 20030506 |
| | CN 1653091 | A | 20050810 | CN 2003-810202 | 20030506 |
| | JP 2005524741 | T | 20050818 | JP 2004-503514 | 20030506 |
| | RU 2281294 | C2 | 20060810 | RU 2004-135557 | 20030506 |
| | ZA 2004008972 | A | 20051116 | ZA 2004-8972 | 20041105 |
| | NO 2004005346 | A | 20050207 | NO 2004-5346 | 20041206 |
| PRAI | EP 2002-445055 | A | 20020507 | | |
| | WO 2003-SE726 | W | 20030506 | | |

AB The process comprises polymerizing ≥ 1 water-soluble monomer (e.g., acrylamide and acryloxyethyltrimethylbenzylammonium chloride) in an aqueous solution of salt in the presence of a dispersant polymer (e.g., diallyldimethylammonium chloride-acryloxyethyltrimethylammonium chloride-polyethylene glycol Me ether acrylate copolymer), wherein the dispersant polymer is a copolymer of a monomer mixture comprising ≥ 1 cationic monomer and ≥ 1 monomer containing tetrahydrofurfuryl acrylate, tetrahydrofurfuryl methacrylate, or a monomer $\text{CH}_2:\text{C}(\text{R}_1)\text{COO}[(\text{CH}_2)_n\text{CH}(\text{R}_2)\text{O}]\times\text{R}_3$ ($\text{R}_1 = \text{H, Me; R}_2 = \text{H, C1-2 alkyl; R}_3 = \text{H, C1-4 alkyl, Ph, benzyl; n} = 1-4; x = 1-50$), and the monomer mixture is free from monomers which are not soluble in water and/or the dispersant polymer is obtainable by polymerizing the monomer mixture in a reaction medium which is substantially free from organic solvents.

IT 624722-87-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP (Preparation); USES (Uses)

(dispersant; process for preparing polymer dispersion for papermaking)

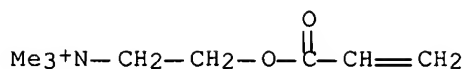
RN 624722-87-8 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride, polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . C1

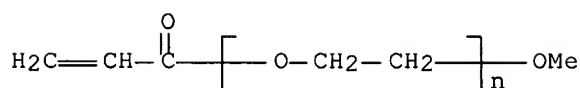
● Cl⁻

CM 2

CRN 32171-39-4

CMF (C2 H4 O)_n C4 H6 O2

CCI PMS



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|----------------------------|---------------|--------------|-------------|--------------------------|--------------------|
| Sun-Yi, H | 2001 | | | US 6262168 B1 | HCAPLUS |
| Takeda, H | 1990 | | | US 4929655 A | HCAPLUS |

L47 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2007 ACS on STN

AN 2003:892458 HCAPLUS Full-text

DN 139:366507

TI Preparing a polymer dispersion, and use in papermaking

IN Struck, Oliver; Przybyla, Christian; Sieger, Achim; Hahn, Mathias;
Ruppelt, Dirk; Jaeger, Werner

PA Akzo Nobel N.V., Neth.

SO U.S. Pat. Appl. Publ., 9 pp.

CODEN: USXXCO

DT Patent

LA English

FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|------|-----------------|------|----------|-----------------|----------|
| PI | US 2003212183 | A1 | 20031113 | US 2003-430422 | 20030507 |
| | US 7091273 | B2 | 20060815 | | |
| | US 2006229401 | A1 | 20061012 | US 2006-450338 | 20060612 |
| | US 7220339 | B2 | 20070522 | | |
| PRAI | US 2002-377989P | P | 20020507 | | |
| | US 2003-430422 | A3 | 20030507 | | |

AB A process for preparing an aqueous polymer dispersion comprises preparing a dispersant co-polymer of a monomer mixture (M) by polymerizing the monomer mixture (M) in a reaction medium which is substantially free from organic solvents and/or substantially free from monomers which are not soluble in H₂O, the M comprises ≥1 cationic vinyl monomer (m₃) and ≥1 monomer (m₄) which is tetrahydrofurfuryl acrylate, tetrahydrofurfuryl methacrylate, or a monomer CH₂:CR₁CO₂((CH₂)_nCHR₂O)_xR₃; where R₁ = H or Me; R₂ = H or Me or Et; R₃ = H, Cl-4 alkyl, Ph, or benzyl; n = 1-4, and x = 1-50, and polymerizing ≥1 water-soluble monomers (m) in an aqueous solution of a salt in the presence of the dispersant polymer.

not a id

IT 624722-87-8P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified); PREP
(Preparation); USES (Uses)
(polymer dispersion used in papermaking)

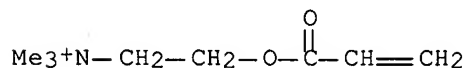
RN 624722-87-8 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(1-oxo-2-propenyl)oxy]-, chloride,
polymer with α -(1-oxo-2-propenyl)- ω -methoxypoly(oxy-1,2-
ethanediyl), graft (9CI) (CA INDEX NAME)

CM 1

CRN 44992-01-0

CMF C8 H16 N O2 . Cl



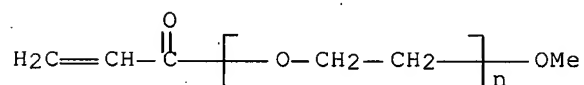
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CM 2

CRN 32171-39-4

CMF (C2 H4 O)_n C4 H6 O2

CCI PMS



RETABLE

| Referenced Author (RAU) | Year (RPY) | VOL (RVL) | PG (RPG) | Referenced Work (RWK) | Referenced File |
|----------------------------|---------------|--------------|-------------|--------------------------|--------------------|
| Anon | 1986 | | | EP 0169674 | HCAPLUS |
| Anon | 1986 | | | EP 0170394 | HCAPLUS |
| Anon | 1986 | | | EP 0183466 | HCAPLUS |
| Anon | 1990 | | | EP 0364175 | HCAPLUS |
| Anon | 1993 | | | EP 0525751 | HCAPLUS |
| Anon | 1994 | | | EP 0630909 | HCAPLUS |
| Anon | 1995 | | | EP 0637598 | HCAPLUS |
| Anon | 1995 | | | EP 0657478 | HCAPLUS |
| Anon | 1996 | | | EP 0717056 | HCAPLUS |
| Anon | 1998 | | | EP 0831177 | HCAPLUS |
| Anon | 2000 | | | WO 0011052 | HCAPLUS |
| Anon | 2000 | | | WO 0011053 | HCAPLUS |
| Anon | 2000 | | | WO 0020470 | HCAPLUS |
| Anon | 2000 | | | EP 0877120 | HCAPLUS |
| Anon | 2001 | | | WO 0118063 | HCAPLUS |
| Fock | 1995 | | | US 5447981 A | HCAPLUS |
| Huang | 2001 | | | US 6262168 B1 | HCAPLUS |
| Hurlock | 1997 | | | US 5597859 A | HCAPLUS |

| | | | | |
|---------|------|--|---------------|---------|
| Hurlock | 2000 | | US 6133368 A | HCAPLUS |
| Messner | 1995 | | US 5403883 A | HCAPLUS |
| Nzudie | 2001 | | US 6221957 B1 | HCAPLUS |
| Takeda | 1990 | | US 4929655 A | HCAPLUS |
| Takeda | 1996 | | US 5587415 A | HCAPLUS |

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L4 10 S E4
E TOSHIYA/AU
SEL RN L1

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FILE 'REGISTRY' ENTERED AT 10:29:54 ON 07 JUN 2007

L46 1 S 620531-02-4

FILE 'HCAPLUS' ENTERED AT 10:30:13 ON 07 JUN 2007

L47 3 S L46
L48 8 S L47,L31
L49 6 S L47,L44

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